UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/840,030	05/04/2004	Thomas J. Ribarich	IR-1811(2-3971)	7761

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EXAMINER
TRAN, THUY V

ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/840,030	RIBARICH ET AL.
	Examiner	Art Unit	
	Thuy V. Tran	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 May 2004</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,12-17 and 20* is/are rejected.

7)☒ Claim(s) *11,18,19,21 and 22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>05 May 2004</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date <u>05/05/2004</u>.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

This is a response to the Applicants' filing on May 4th, 2004. In virtue of this filing,

claims 1-22 are currently presented in the instant application.

Inventorship

1.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Information Disclosure Statement

2.   The information disclosure statement (IDS) submitted on May 4th, 2004 is in compliance

with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being

considered by the examiner.

Drawings Objections

3.   The drawings are objected to because the drawing lines and reference characters/

numerals in all the figures 1-5 are not uniform and legible, respectively. Corrected drawing

sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

abandonment of the application. Any amended replacement drawing sheet should include all of

the figures appearing on the immediate prior version of the sheet, even if only one figure is being

amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be removed from

the replacement sheet, and where necessary, the remaining figures must be renumbered and

appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application must be

labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR

1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

Claim Objections/ Minor Informalities

4.   Claims 1 and 11 are objected to because of the following informalities:

Claim 1, line 6, --the-- should be inserted between "to" and "ballast";

Claim 1, line 7, --the-- should be inserted between "receiving" and "parameters"; and

Claim 11, line 2, "in" should be changed to --an--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on
> sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 1, 4-8, 10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by

Crane (U.S. Patent No. 6,150,772).

With respect to claim 1, Crane discloses, in Figs. 1-2 and 10, an electronic ballast control for controlling a power switch [36] in an electronic ballast to switch power to a load [12]; the electronic ballast control comprises (1) a storage device (which is external memory [16]; see Fig. 1; col. 3, lines 52-54) for storing parameters (see col. 7, lines 16-29) to operate ballast control components, (2) a control device [14] (see Fig. 1) coupled to the storage device for reading parameters from the storage device and providing the parameters (see col. 7, lines 16-29) to the ballast control components, (3) an oscillator [130] (see Fig. 10) coupled to the control device [14] (see Fig. 1) for receiving the parameters (see col. 7, lines 16-29) from the control device and providing an oscillation signal based on the received parameters (see col. 7, lines 16-29), and (4) an output section (see Figs. 2B and 10) coupled to the oscillator [130] and operable to receive the oscillation signal and produce signals for operating the power switch (which includes [140, 146]; see Fig. 10).

With respect to claims 4 and 5, Crane discloses that the ballast control further comprises an input device (not shown; see col. 3, line) coupled to the storage device for inputting data to the storage device, and an input data to the input device, wherein the input device is operable to translate the input data to a format suitable for input to the storage device (see col. 3, lines 51-65).

With respect to claim 6, Crane discloses that the control [14] is implemented on an integrated circuit (see Fig. 2A).

With respect to claim 7, the storage device of Crane appears to be a digital storage device (see col. 3, lines 54-65).

With respect to claim 8, the control device of Crane is a digital storage device (see Fig. 2A; col. 3, lines 46-65; col. 4, lines 11-40).

With respect to claim 10, Crane discloses that the control device [14] or the controller is programmable with parameters from the storage device, whereby the control is operable to obtain variable operating characteristics based on parameter programming (see col. 3, lines 46-65).

With respect to claim 12, Crane discloses, in Figs. 1-2, an electronic ballast control for controlling a power switch [36] in an electronic ballast to switch power to a load [12] and a corresponding control method; the method comprises (1) storing data in a storage device (which is external memory [16]; see Fig. 1) related to ballast control parameters (see col. 7, lines 16-29), (2) reading data from the storage device [16] to obtain parameters for operating the ballast control [14] (see Fig. 1), and (3) applying the parameters (see col. 7, lines 16-29) to ballast control components to obtain selected operating points for the components, whereby the ballast control outputs a control signal based on a selection of parameters applied to the components (see Figs. 1-2 and 10; col. 3, lines 46-65; col. 7, lines 16-29).

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7.   Claims 1-10, 12-17, and 20 are rejected under 35 U.S.C. 102(e) as being anticipated by Ribarich et al. (U.S. Patent No. 6,771,029).

The applied reference has a common assignee with the instant application. Based upon the earlier effective

U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C.

102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor(s) of this application and is thus not the invention "by another," or by

an appropriate showing under 37 CFR 1.131.

With respect to claim 1, Ribarich et al. discloses, in Figs. 1-2, an electronic ballast control

for controlling a power switch [M2, M3] in an electronic ballast [12, 14, 16, 18, 26] to switch

power to a load [26]; the electronic ballast control comprises (1) a storage device (which is

memory storage in [22]; see Fig. 1; col. 3, lines 38-41) for storing parameters to operate ballast

control components, (2) a control device [22] (see Fig. 1) coupled to the storage device for

reading parameters from the storage device and providing the parameters to the ballast control

components, (3) an oscillator (which is configured in IC2 connected to pin 2; see Fig. 2; col. 5,

line 47) coupled to the control device [22] (see Figs. 1-2; col. 5, line 57-67) for receiving the

parameters from the control device and providing an oscillation signal based on the received

parameters (see col. 5, lines 47-56), and (4) an output section [18, 26] (which includes R13, R14,

R15, R26, R27, M2, M3; see Figs. 1-2) coupled to the oscillator and operable to receive the

oscillation signal and produce signals for operating the power switch (which includes M2, M3;

see Fig. 2).

With respect to claim 2, Ribarich et al. discloses that the ballast control further comprises

a minimum frequency signal applied to the oscillator to determine a minimum oscillation

frequency provided by the oscillator (see col. 5, lines 47-56).

With respect to claim 3, Ribarich et al. discloses that the ballast control further comprises

a passive component coupled to the oscillator to provide the minimum frequency signal (see col.

5, lines 47-56).

With respect to claims 4 and 5, Ribarich et al. discloses that the ballast control further comprises an input device [10] (see Fig. 1) coupled to the storage device for inputting data to the storage device, and an input data to the input device, wherein the input device is operable to translate the input data to a format suitable for input to the storage device (see col. 4, lines 6-38).

With respect to claim 6, Ribarich et al. discloses that the control is implemented on an integrated circuit (see Fig. 2).

With respect to claim 7, Ribarich et al. discloses that the storage device is a digital storage device (see Fig. 2).

With respect to claim 8, Ribarich et al. discloses that the control device is a digital control device (see Fig. 2).

With respect to claim 9, Ribarich et al. discloses that the oscillator is a digital oscillator (see Fig. 2).

With respect to claim 10, Ribarich et al. discloses that the control device or the controller is programmable (see col. 3, lines 22-45) with parameters from the storage device, whereby the control is operable to obtain variable operating characteristics based on parameter programming.

With respect to claim 12, Ribarich et al. discloses, in Figs. 1-2, an electronic ballast control for controlling a power switch [M2, M3] in an electronic ballast [12, 14, 16, 18, 26] to switch power to a load [26] and a corresponding control method; the method comprises (1) storing data in a storage device (which is memory storage in [22]; see Fig. 1) related to ballast control parameters (see col. 3, lines 17-20), (2) reading data from the storage device to obtain parameters for operating the ballast control (via a control device [22]; see Fig. 1), and (3)

applying the parameters to ballast control components to obtain selected operating points for the

components, whereby the ballast control outputs a control signal based on a selection of

parameters applied to the components (via microprocessor [22] and an oscillator in IC2; see Figs.

1-2; col. 5, lines 47-67).

With respect to claim 13, Ribarich et al. discloses that (1) storing data in the storage

device further comprises applying a storage input signal (via [10], see Figs. 1 and 3) to an input

coupled to the storage device, and (2) applying an enable signal to another input coupled to the

storage device to enable the data signal to be accepted and stored by the storage device (see Figs.

1 and 3; col. 7, lines 24-37).

With respect to claim 14, Ribarich et al. discloses that the data is digital data (see Figs. 1-

3).

With respect to claim 15, Ribarich et al. discloses that the method further comprises

selectively applying the digital data to the ballast control components to obtain operating set

points for the ballast control (see Figs. 1-3; col. 3, lines 21-45; col. 5, lines 47-56).

With respect to claim 16, Ribarich et al. discloses that the method further comprises

applying a minimum frequency signal applied to the oscillator component in the ballast control

to determine a relative minimum switching frequency for the ballast control (col. 5, lines 47-56).

With respect to claim 17, Ribarich et al. discloses that the method further comprises

providing a buffered voltage bias (which is VDC at 5V; see Fig. 2) in the ballast control that is

decoupled from an AC input.

With respect to claim 20, Ribarich et al. discloses, in Figs. 1-2, an electronic ballast

control IC comprising (1) a digital memory (which is in [22]; see Fig. 1; col. 3, lines 21-45) for

storing control parameters, (2) a digital controller [22] (see Fig. 1) coupled to the memory for

reading parameters from the memory, and (3) a digital oscillator (which is configured in IC2

connected to pin 2; see Fig. 2; col. 5, line 47) coupled to the control device [22] (see Figs. 1-2;

col. 5, lines 57-67) for receiving a digital oscillation set point and providing an oscillation signal

based on the set point (see col. 3, lines 54-58; col. 5, lines 47-56).

Allowable Subject Matter

8.   Claims 11, 18-19, and 21-22 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Prior art fails to disclose or fairly suggest:

- An electronic ballast control for controlling a power switch in an electronic ballast to

  switch power to a load further comprising a DAC in the oscillator for converting an

  input digital signal to an analog signal, whereby the oscillation frequency is related to

  the analog signal, in combination with the remaining claimed limitations as called for

  in claim 11;

- A method for operating an electronic ballast further comprising counting a number of

  events in the ballast control to determine when the number of events reach a

  predetermined value in a specified time period, in combination with the remaining

  claimed limitations as called for in claim 18;

- A method for operating an electronic ballast further comprising timing one or more

  events to determine if a predetermined time duration is achieved for the one or more

  events, in combination with the remaining claimed limitations as called for in claim

19;

- A ballast control IC further comprising a digital counter for counting a number of events and providing an indication if a predetermined count is reached, in combination with the remaining claimed limitations as called for in claim 21; and

- A ballast control IC further comprising a timer in the controller for timing an event and outputting a signal if a predetermined duration of time passes related to the event, in combination with the remaining claimed limitations as called for in claim 22.

Citation of relevant prior art

9.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Kuennen et al. (U.S. Patent No. 6,825,620) discloses an inductively coupled ballast circuit.

Prior art Killat (U.S. Patent No. 6,573,666) discloses a digital regulation of lamps.

Prior art Rucki (U.S. Patent No. 4,680,508) discloses a load control circuit.
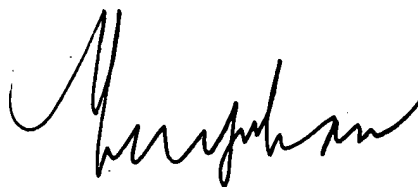
Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

07/20/2005

THUY V. TRAN
PRIMARY EXAMINER